

ANCHORAGE AMATEUR RADIO CLUB

CONFIDENTIAL

DON'T FORGET THAT SOMEONE SPECIAL THIS MONTH



GENERAL MEETING ON FRIDAY FEBRUARY 5, 1999



CUPID IS WATCHING TO SEE THAT YOU DON'T FORGET

Anchorage Amateur Radio Club

General Meeting Friday February 5, 1999

KAKM presents Digital Television & a tour of their Studio

IN THIS ISSUE:

A Christmas Story as told by Nancy Richar, WL7KH
 A Poem by Nancy Richar, WL7KH
 Cooperation Curbs "Wireless Modem" QRM
 FCC Acts on Alleged Exam License Fraud Cases

ARRL Comments in Part 15 Proceedings
 DX News
 Upgrades held by FCC
 And Much More

Officers

President	Peter Bailey WL7BW
Vice President	Susan Woods NL7NN
Secretary	Marcia Knutson AL7RE
Treasurer	Paul Spatzek WL7BF
Trustee	John Wolfe AA0NN
Activities Chairman	John Lynn KL0CY
News Letter Editor	Edythe Lynn KL0EO
Membership Chairman	Fred Erickson KL7VC
Past President	Rob Wilson AL7KK

Three Year Board Members

Bruce McCormick WL7YR
 John Orella KL7LL
 Harvey Rookus NL7DK

One Year Board Members

Dianne Hammer NL7KN
 Rob Wilson AL7KK
 Conney Eastman KL0FK
 Richard O'Connor WL7CPG
 Dave Filley WL7CDJ

AARC web page & Email contact addresses:

<http://kl7aa.akconnect.com>
 president to windsman@alaska.net
 webmaster to kl7aa@lawson.akconnect.com
 membership to frederickson@iname.com
 activities to johnlynn@gci.net

News Letter Submissions, Information or corrections:

Submissions must be received 2 weeks before meeting
 Email: johnlynn@gci.net Facsimile: 907-338-4791
 Mail: 7013 Trafford Ave. Anchorage 99504

KL7G CODE PRACTICE SCHEDULE

Schedule: 7:00am, 10:00am, 4:00pm, 7:00pm, 10:00pm
 AK time, every day Frequencies: 3575 KHz, 7075 KHz &
 145.35 MHz; Sending Speeds: 22 wpm, 15 wpm, 7 wpm

Nets in Alaska:

The following nets are active in South-central Alaska:
 Alaska Sniper's Net 3.920 MHz 6:00 PM daily
 Alaska Bush Net 7.093 MHz 8:00 PM daily
 Alaska Motley Net 3.933 Mhz 9:00 PM daily
 Alaska Pacific Emergency Preparedness Net 14.292 MHz
 8:30 AM M-F
 QCWA net 146.97/.37 repeater Sundays 8:00 PM local
 850 No Name Net 146.85/.25 repeater Sundays 8:00 PM
 Son of Sideband Net 144.20 USB Mondays 9:00 PM local
 Big City Simplex Net 146.520 FM Tuesdays 8:00 PM local
 ARES net 147.30/.90 Mhz Thursdays at 8:00 PM local
 PARKA net 147.30/.90 Mhz Thursdays at 9:00 PM local

Anchorage & Mat Valley Area Repeaters

KL7AA systems at Flattop Mt., 2,200 ft
 146.34/94 Mhz, 80 watts, autopatch, 100/141.3 Hz PL
 223.34/224.94, 25 watts, no patch, no PL
444.70/449.70, 25 watts, autopatch, 100/141.3 PL
 KL7ION at Mt. Gordon Lyon 4,700 ft
147.30/90 Mhz - 80 watts, no patch, no PL
 KL7AA, Mt. Alyeska, 2,400 ft.
146.16/76 Mhz, 25 watts, no patch, 141.3 Hz PL
 KL7CC, Anchorage Hillside, SCRC club
146.97/.37 Mhz, autopatch, 103.5 Hz PL
 KL7DJE at Grubstake Peak, 4,500 ft.
 147.09/.69 Mhz, 25 watts, no patch, 100 Hz PL
444.925/449.925, 10 watts, no patch, 141.3 Hz PL
 KL7JFU, Palmer, MARA club
146.85/.25, autopatch, no PL
 KL7AIR Elmendorf, EARS
147.27/.87 no patch, 107.2 Hz PL
 KL7G West Anchorage & Events
 449.65/444.65 Mhz, patch, no PL

Anchorage & Mat Valley Simplex Frequencies

146.52 Mhz Calling and Emergency frequency
 147.57 / 447.57 (crossband linked) HF spotters & chat
 146.49 Mhz Anchorage area simplex chat
 146.41 Mhz Mat Valley simplex chat

— HOT LINKS —

Internet Web links, the favorites from our readers
AARC <http://kl7aa.akconnect.com>
SCRC <http://www.servcom.com/worcester/scrc.htm>
EARS <http://ww2.customcpu.com/kl7air/default.htm>
KL7J <http://www.alaska.net/~buchholz>
Fairbanks AARC:
<http://ffd1m1mac.uafsom.alaska.edu/aarc/aarc.html>
Yukon Amateur Radio Association:
<http://www.klondike.com/yara/index.html>
HAARP Project:
<http://server5550.itd.nrl.navy.mil/projects/haarp/>
<<Amateur Radio Reference Library>>
<http://www.area-ham.org/library/libindex.html>
Hamradio: <http://www.hamrad.com/>
Solar Terrestrial Activity <http://209.130.27.95/solar/>
ARRL <http://www.arrl.org/>
Propagation Report Recording 566-1819
please let us know if there are other club pages or good starting points that should appear here

+=====+=====+=====+

VHF NETS ABOUND

All of you new HAMs take note: there are lots of nets and nice folks to visit with. The Son of Sideband Net runs each Monday night at 9:00 PM local on 144.200 MHz USB with a 6 Meter extension on 50.200 MHz USB. On Tuesday night, the Big City Simplex Net operates on 146.520 FM at 8:00 PM local with a 70cm checkin on 446.00 FM and a 6M checkin on 52.525 FM immediately following. On Thursday the ARES net starts at 8:00 PM on the 147.30/.90 repeater with Amateur News line followed at 9:00 PM by the PARKA net. On Sunday there are two nets at the same time. In Anchorage, the QCWA net runs at 8:00 PM on the 146.97/.37 repeater (103.5 Hz PL) and in the valley the 850 No Name Net runs on the 146.85/.25 repeater.

+=====+=====+=====+

This Month's Speaker

We will have as our speaker Susan Reed and Frank Mengel from KAKM will be presenting digital TV form the Public Broadcasting point of view. This will include a tour of the KAKM studio on the APU campus. The meeting will be start in the regular location at Carr-Gottstein Building, APU Campus.

+=====+=====+=====+

ABACUS RADIO REPAIR

Factory authorized service for: Kenwood, ICOM, Yaesu, Alinco, Amateur radio equipment.
Call Jim Wiley, KL7CC (907) 338-0662

NEWSLETTER ARTICLES: All articles from members and interested persons are very welcome. If you wish to submit any articles, jokes, cartoons, please have it typed or neatly handwritten. It can be submitted by computer disk, fax, or E-mail to the newsletter editor at the address listed on the cover. Submissions must be in the hands of the editor at least two weeks prior to the meeting.

+=====+=====+=====+

Regular HAM Gatherings:

* **Tuesdays, 11:30 AM to 1:00 PM:** Join the gang for lunch and an eyeball QSO at the Royal Fork, Penland Park, East.

Saturdays, 7:30 AM: Here is a great way to get started on the week-end come and meet with some of the locals and have a great breakfast at Phillips Restaurant, at the corner of Arctic and International. Great Fun.

+=====+=====+=====+

THIS MONTH'S EVENTS

February 3: VE License Exams 6:30 PM Carr-Gottstein Building, APU Campus. Bring photo ID, copy of license (if any) and any certificates of completion.

February 5: ARRC general meeting at 7:00 PM The meeting will be at the Carr-Gottstein Building, on the APU Campus. Talk in will be on 147.300.

February 6: ARES Planning Committee 9:30 AM Conference Room at 3rd floor of the Alyeska Bldg. Everyone welcome. Focusing on preparedness and training.

February 8: Vote on antenna ordinance, come watch in the Assembly Chambers at the Loussac Library beginning at 6:30PM

February 12: SCRC general meeting at 7:00 PM room 220, Business Ed. Bldg., UAA campus. Talk in on 147.57 simplex.

February 13: VE License Exams. Hope Cottage Offices, 540 W. International in the Board Room. At 2:00 PM. Be sure to bring photo ID, copy of license (if any) and any certificates of completion.

February 13 & 14: Fur Rondy Grand Prix needs HAMs on the 6 corners, in the pit and at the start and finish line from 9AM to 4PM. Food is provided, you bring your 2M radio, spare battery and warm clothes. Contact WL7CKB Mike Borer on 147.300 repeater or at 349-8191 to volunteer.

February 19, 20 & 21: Fur Rondy North American Sled Dog Championship Race: Need HAMs for 19 checkpoints

and on the status board on 4th Avenue between 1PM and 4PM. Bring your 2M radio, spare battery and warm clothes. Contact Susan Woods on 147.300 repeater or at 561-7369 to volunteer.

February 27: EARS Ham Fest from 9AM to 3PM at Tudor Bingo. Contact Tina Johnston at 333-0659 or lectina@alaska.net to rent a table.

February 27 & 28: Jr. Iditarod Race needs some HAMs to help with communications. Especially looking for two with snow machine experience and 2M gear to ride sweep on Iditarod provided machines. Being organized by MARA, all HAMs welcome. Contact Rich KL0DY at 745-5222 or Wayne KL7HHO at 376-5604 to volunteer.

March 6, 7 and until its done: Iditarod Race: Needs HAMs for Start in Anchorage, Restart at Wasilla new airport (or Willow snow permitting), and then at Headquarters and on the trail. Contact the communications coordinator, Ken Delp at 337-6890 or ken.delp@faa.gov to volunteer.

+====+====+====+====+

A BABY SAVED AT CHRISTMAS TIME

as reported by Susan Woods NL7NN,
Bruce McCormick WL7YR and Nancy Richar WL7KH

It was late one night while Susan Woods (NL7NN) was doing ARES paper work , the radio sprang to life on 147.3(our ARES wide area repeater). It was about 1:00 AM Monday December 21, 1998. We heard a voice say, this is KL0MR, Is anyone listening, Can anyone help me. Before I could grab the mic. I heard Nancy Richar (WL7KH) in Trapper Creek ask if there was a problem. Ray Solomon KL0MR says: "I was driving from Fairbanks to Anchorage (351 miles) and my car died, a couple of hours ago and we think that the computer brain died." "How many people are with you" asked Nancy. Ray replies "there are a total of two adults and a 15 month old baby."

The weather that night was not good for being stranded on a lonely stretch of Alaska highway.. The temperature was about "0" and winds were gusting to 15 miles per hour, making the chill factor a cold 30 below. (Exposed flesh freezes in about one minute in the wind) Nancy asks "What is your location?" Ray says we are driving a blue Mazda and are somewhere between mile 105 and 110 on the Parks Highway in the south bound lane. Now Nancy has a problem. She lives on a homestead with her son and has no telephone. (her ham radio is her only means of communications.) Does she get her cold weather gear on and take the snow machine and sled and travel the 15 miles out to the highway and bring the people back to her place or can she raise another ham in the area with a phone. **SEVERAL HAMS RESPOND TO NANCYS CALL.** Ron Robson (WL7N) of Anchorage had been listening and offered to make the call to the Alaska State

Troopers in Anchorage. He was told by the dispatcher, they did not have a Trooper in the Trapper Creek area at the time and it would be a while before one was available to respond.

Nancy (WL7KH) says she knows of a bed and breakfast in the area and provided the phone number to Susan Woods (NL7NN). Susan reports, that the lady says her husband was out of town, and she did not want to go out alone at that time of night. She gave Susan another number of a bed and breakfast down the highway. They were not open for business. Nancy was getting worried as the car had broken down hours ago and they had no heat and the temperature was dropping. She was worried about the family. She was remembering a couple of years ago when a small boy and his grandparents froze to death after their car had broken down on the Denali Highway. Ron (WL7N) Suggested that if we could find Joe May's (AL7IK) phone number who lives in Trapper Creek, that he might be able to help. Wayne Groomer (KL7HHO) in Wasilla came on the air and said he had Joe's number and would call him.. Wayne reported that Joe was headed out the door and would be there in about 20 minutes. Ray (KL0MR) was asked to let us know when Joe (AL7IK) got there, he said he would but his battery was getting weak. About 1:30 AM Ray called to say Joe was there and they were going to Joe's house for the night. Wayne (KL7HHO) Called Joe's wife Sandy(AL7IO) and asked to be notified when they all arrived at the house. (Rays battery had died and Joe doesn't have a 2 meter rig in the car.) It was about 2:00 AM when the three were safely at Joe's.

Later that morning, Joe's wife, Sandy (AL7IO) drove them 70 Miles into Wasilla. Another HAM, Frank Pratt (KL7FSE) of Anchorage, who heard of the ordeal, and drove up to Wasilla, picked them up and brought them the last 50 miles to Anchorage and their home.

While snuggled safe back in Anchorage later that day, Ray Says thanks to ALL OF THE HAMS AND OTHER PEOPLE WHO HELPED ALONG THE WAY, ON A COLD ALASKA NIGHT. Merry Christmas to all

+====+====+====+====+

The Tale of Two Unrelated Frequencies or Understanding CROSS BANDING

All names have been randomized to protect ...well ..., so if you think your being singled out...Sorry about that!

Hey Joe...I learned a neat new trick with my new AtomBlaster 7000, I can make it receive on one band, and transmit automatically on the other band. Neat HUH ? I could put this up way up on the side of the mountain, and we could get into Jim's repeater, while carrying our little UHF handhelds. And we could use the repeater, just like we would if we were at home, or in our trucks. And since it doesn't take much power in standby, I can set it up and go away, and it'll do all

these things automatically. I can even do this during a net, so our group can join into the net, without having to dig out and charge the other handhelds. I'm going to run right up the hill and pick a couple of quiet frequencies, and when I get back we can play around with this OK?

Uh Bob, think you'd better cool down a bit, there are several things you need to remember when you make your radio Cross Band. (That's what it's called when you receive on one frequency and simultaneously transmit on another frequency not in the same band) First of all, before you just go pick a couple of frequencies, I'd suggest you call the ARRL Frequency Coordinator (1) in our area, and make sure what you think are quiet frequencies, are truly that and not being used somewhere nearby that you can't hear. And your going to have to coordinate with him the use of these frequencies, not only because it's the right thing to do, but also to protect you from others with the same idea. In addition someone besides our group needs to know who and where to go if there's a problem!

What do you mean Problem, what could go wrong ? This AtomBlaster is brand new right out of the box, and it's guaranteed for a year!

Well, first off, what if the two frequencies you choose are coordinated, your going to be asked to move, or what if the cross banding comes up in the middle of an emergency on one of the frequencies? Also even though the equipment is brand new and guaranteed, what if one of the frequencies you choose happens to be a harmonic of say the local Fire Department? How do you think their going to react to hearing us talking on their channel ?

Joe, Why can't I use any frequency I want, they are all set aside for any amateur with a license aren't they?

Bob, certain frequencies are set aside for certain things, for example 146.52 is the nationally recognized VHF simplex calling frequency, just like 446.00 is on UHF, or 223.50 is on the 220 band. And certain parts of the bands are set aside for certain modes of operation, like weak signal, EME, CW, Satellite, ATV, Moon Bounce, and Repeater service. If you put your cross band link into one of these area's not only will someone be really PO'd at you, but you give the whole amateur community a bad name, if we can't follow our own agreements, and FCC rules and regulations, then eventually the Government will find some other group that has a need for more frequencies, who will abide by the rules.

And Bob, even though your radio is brand new, it just doesn't have the filtering necessary to help assure it's harmonic's don't radiate out to the antenna, and on to other non-amateur frequencies. You don't want the FCC or the local Fire Department banging on your door at 2 AM demanding you stop your transmissions do you ? And if they did, how do you

plan on turning off the gear in a timely manner' if it's up on the hill somewhere ?

When you put on a cross band system, you now fall into the repeater category for FCC rules and regulations:

1. You must ID the transmitter every 10 minutes as long as the link is in service, this ID may be in the form of CW or voice.
2. You must have a method of controlling the cross band equipment if it's not directly accessible by you. This control may exist on 222 MHZ or above, or you can use a telephone line.
3. You must have some method of shutting off the cross band if the transmitter stays on due to noise or whatever, this automatic or manual shut off has to occur within 5 minutes of the beginning of the transmission.

Just as important: you should never cross band two repeaters, or a simplex frequency into a repeater, unless you have permission of the repeater owner or trustee. Remember repeaters are ARRL (FCC) coordinated. The repeater owner and or trustee is responsible for what goes out, and where it goes out. If there's interference coming through your cross banding and they aren't aware of it, how do they determine where the interference is coming from? What if there's an emergency phone patch going on, how do you make sure your cross band doesn't come up in the middle of it? And BOB listen really close to this, you've got to be really careful when cross banding into the UHF band, remember we share that band with the US Military, and there's nothing more chilling than to be woken up at 330 AM by someone at your front door, with a M-16 pointed at you, telling you that your equipment is causing interference to a US Military radar system. Remember that the person on the other side of this weapon is not a radio guy, he (or she) is a person on a mission, who's been told that the interference to the radar system has been detected coming from your home. They are treating this as a threat to National Security, and you'd better hope you know where the power switch is, and quickly. Because they have the authority to do almost anything to assure that the threat to security has been neutralized. AND YES besides turning off your gear, they CAN take it away from you. And getting it back is a real hassle!

Bob, cross banding is fun, but please remember this little discussion if you want to keep everyone on your side, and keep the good name of Amateur Radio Alive.

Gee Joe, guess I'd better look into this a bit more before I get us both into a bunch of trouble.

The ARRL Frequency Coordinator for Alaska is Mel Bowns
694-9589 73 Doug KL7IKX - ARRL OOC

+=====+=====+=====+

**HAARP test needs HAMs
from Ed Cole , AL7EB**

For QST to Alaskan Hams: The HAARP Research Facility is planning a test of its recently completed upgrade to 48 antennas. HAARP is inviting hams to take part in listening test in March, similar to what was done in 1997. In addition I've been invited to conduct a "ham propagation experiment" with them (see message from Edward Kennedy, below). I am seeking hams with high power, large antenna systems on 50 and 144 Mhz, who would be interested in participating. I am especially looking for hams with this capability in the YT (i.e. White Horse or Dawson). Ed, al7eb

Date: Tue, 19 Jan 1999 18:35:46 +0000

To: al7eb@amsat.org

From: "Edward J. Kennedy" <kennedy@jtd.nrl.navy.mil>

Subject: HAARP test coming up

Finally, we have the 48 element HAARP system functional. We are planning to conduct a research program in March from the 8th to the 28th or so. If you are interested in participating in this test, please let me know as soon as possible. There are still several open slots to schedule a dedicated test and I would love to get a ham-related test into the schedule. Also, please feel free to pass this information around to others who may also be interested in conducting a test. The major criteria will be scientific merit and the ability to publish the results in a journal of some type (QST is OK). Best regards, Ed (Kennedy)

HAARP homepage: <http://w3.nrl.navy.mil/haarp.html>

March Test: <http://w3.nrl.navy.mil/projects/haarp/hh2.html>

+==+==+==+==+==+==+==+

**Iditarod- Iditarod-Iditarod
CQ CQ CQ**

Ken Delp, KL7FD, e-mail ken.delp@faa.gov, 337-6890 voice/fax is the Communications Coordinator for the 1999 Iditarod Sled Dog Race. He is looking for hams with 2-meter capability (handheld) for the start and restart. He needs about 30 hams for the Start and 20 hams for the Restart. He is also looking for a few hams with HF gear for a few locations on the trail and to copy traffic in and around the bowl/valley to be relayed back to the HQ in the Regal Hotel via 2m/70cm. The HF will be used at locations where there is no local telephone service and when the Iridium Satellite Telephones don't work. All previous and new volunteers please call or e-mail him with your call sign, class, available equipment, dates you could be available, and preferences. A backup for Ken is

Mark Kelliher, KL7TQ, 694-3722, kelliher@alaska.net

+==+==+==+==+==+==+

**QRP Getting Started
Jim Larsen, AL7FS**

QRP essentially means you reduce power. As a definition, further defined by the Amateur Radio Club International (ARCI), QRP is operating your station at less than 5 watts output on CW or 10 watts peak power on SSB. (ARCI is the International QRP organization). I have been involved with QRP since about 1970. From the beginning it has always been fun to work another station while running 5 watts or 2 watts or 50 milliwatts. More than fun...it is exciting! At the April 1999 Anchorage Amateur Radio Club (AARC) Club meeting I will be presenting a comprehensive program titled "Why QRP?". The program, along with copious handouts and examples to touch and feel, will give you a very complete overview of QRP operating and equipment.

Simple QRP

One simple aspect of QRP operating that is often overlooked is that it can often be done with your existing QRO (high power) radio. In my case, I largely operate with my 100 watt Kenwood TS450S. One nice thing about Kenwood radios is they are capable of reducing power (going QRP) right from the front panel. My power can be reduced down to zero or up to 100 watts. I most often run from three to five watts. Some radios will not tune down to less than five watts and often bottom out at 7-10 watts. You can still get a feel for QRP by running at these levels so don't pass up the opportunity because you can only get down to 10 or 15 watt. Later you can learn how to enter into the ALC circuit and apply voltages to allow even lower settings.

QRP for the CW operator is an especially friendly place to go to improve Morse code. Many of the QRP operators prefer more modest speeds and are very willing to slow down to whatever is needed. As you improve, there are also high-speed operators who will move up in speed with you. I often operate from 15-18 wpm and feel no pressure to move up to high speed.

QRP Works

An example of what can be done was recently described by WE6W in his email to the QRP-L mail reflector¹, a major hangout for the QRP crowd. (More than 2500 QRP operators are subscribed and regularly communicate on this mail reflector.)

Subject: Pixie2:Nor-Cal to Acworth, GA at 400mW!

Date: Thu, 31 Dec 1998 03:43:39 EST

From: we6w@juno.com (Ed Loranger)

To: "Low Power Amateur Radio Discussion" <qrp-l@Lehigh.EDU>

Oh my Goodness!! Was tiddling around playing with bias levels on the Pixie2 oscillator and heard KE4GBE calling C dead on 7040. As I listen to my soldering iron cycle between temps I thought, don't hear many '4' calls, so I called him! Kaboom! WE6W? de KE4GBE ur 339 etc....

First code out the door was: WOW 400 mW, pwr 400mW QTH Santa Rosa, Name Ed, RST 579 KB4GBE de WE6W/QRPp KN.

Then he came back with a monologue and 'WI6W'. Oh heck, QSB is gonna lose him for me..... But he adds Call? WI6W??? call agn pse. BK And he got it right on the next exchange.

So I tell him it is a full transceiver, basic unit has 2 transistors.... He either fainted straight away, measured himself on the floor, or the QSB ended the excitement. Folks, this wasn't over saltwater, we are talking 400 milliwatts for this one and over land!

Maybe we need a warning on these rigs: "Frequent use causes increased excitability." Non-users subject to fainting spells :)

Disclaimer: My pixie is homebrew, I'm not pushing kits here. Just sharing late-night joy of radio! Just about knocked me out of my chair to catch Georgia on 400 mW on 40 meters. Yowsa! -Ed

72, Ed WE6W QRP-Z#106 <http://www.qsl.net/we6w/72> is the QRP version of 73.)

Enjoying Ham Radio every day! Santa Rosa, CA.

How to Know QRP

So how do you know if you are QRP? I feel QRP is largely an attitude and a sincere effort to get under five watts. If you have no wattmeter then guess by turning your power control to near the minimum power output setting. A Yaesu FT-990 seems to bottom out at 7-10 watts at the zero setting. A Kenwood rig will turn down to zero so tweak the control up just a little from zero. If you have a wattmeter you can get close. Many power meters are not very accurate at the five watt level but you can get "close enough" and feel justified you are working to the intent of QRP.

Oak Hill Research QRP Wattmeter

One very nice method of knowing your power output is to build a wattmeter designed for QRP operation. Oak Hills Research (OHR) provides a wonderful QRP wattmeter kit. It has 10 watt, one watt, and 100 mw scales and is designed to be accurate to 5 percent of full scale. I have built this wattmeter and use it in almost all of my QRP operating to assure I am under five watts. I used it to assure I was 900 mw when I worked W5JAY in Arkansas QRPP 2-way (QRPP = less than one watt) last month.

The Oak Hills Research WM-2 was designed specifically for the QRP operator. The unit operates from 300 KHz to 54 MHz. It will measure forward and reflected power at QRP levels down to 5mW. You can select from three full scale power ranges of 10W, 1W or 100mW with an accuracy of 5% of full scale. A rear panel switch allows you to select the internal 9V battery or external power jack for the operating voltage. The WM-2 now uses a very high quality American-made 3" meter movement with a large easy to read scale. The meter circuit current drain is typically 1mA, making it great

for portable use. The wattmeter can be left in-line permanently with very little loss. The kit is supplied with high quality Amphenol SO-239 connectors. The WM-2 is easy to build and align. The alignment consists of setting three voltages with your digital voltmeter. A source of RF is not required for alignment. The completed wattmeter measures (HWD) 4 1/2" x 3 1/2" x 4" and weighs 16 oz. The kit is complete with cabinet, high quality silkscreened and masked PCB, all components and instructions (less 9V battery).

OHR can be contacted at 20879 Madison Street - Big Rapids - MI - 49307; Phone: (616) 796-0920 - 24 hr. Fax: (616) 796-6633 qrp@ohr.com

EMTECH Tuner and LED SWR Indicator

One other QRP accessory that enhances operation is an effective QRP antenna tuner. One such unit that can be used both at home and in the field is the EMTECH ZM-2 Z-Match Antenna Tuner . Good for up to 15 watts, this kit also incorporates a unique LED SER Indicator designed by N7VE. This LED SWR system can also be built as a stand-alone unit from parts around the workbench or from Radio Shack (Frigid North).

<http://www.extremezone.com/~ki7mn/n7veswr.htm>

** Visual SWR Indicator ** Tunes wire antennas such as - Random, Long, Short ** Tunes balance fed antennas such as, Loops, Deltas, Dipoles, Verticals, V's. ** Tunes (from field reports) gutters, window frames, swing sets, and -- bed springs? ** Tunes out coax fed antenna mismatches to make the radio happy. ** Does all the above at 80-10 meters, and usually much faster than other ATUs.

** 15 WATTS MAX! This is an evening project for many, maybe two evenings for others. It is very easy construction, via pictorial drawings. All parts are furnished, including a stick-on panel layout as shown. The big knobs are provided for vernier tuning because the ZM-2 tunes so sharp. One large toroid to wind using a unique method that is fast and extremely easy. One small toroid to wind. Wire is furnished. Kit is complete, no other parts to try to find. Size is 5-1/16" x 2-5/8" x 1-5/8".

EMTECH can be contacted at: EMTECH; 1127 Poindexter Ave W; Bremerton, WA 98312

Send mail to KC7MAS: emtech@steadynet.com

QRP Wrap Up

In this first of several QRP articles I have discussed very basic concepts of QRP and QRP techniques that you can try with your current rig. As you move further into QRP you may wish to build your own monoband or multiband QRP rig, many of which are available as kits. Future articles will address more details of QRP and QRP kits. The program in April will fill in even more information. If you are in a hurry for more please check the following Internet URL (addresses) or have a friend look them up for you.

¹QRP-L <http://qrp.cc.nd.edu/QRP-L>

QRP-L Message Archives

...<http://listserv.lehigh.edu/lists/Archives/qrp-l/>
Oak Hills Research ...<http://www.ohr.com/>
EMTECH ...<http://emtech.stedy.net.com>
New Jersey QRP ...<http://www.njqrp.org/>
KI7MN ... <http://www.extremezone.com/~ki7mn/>
ARCI ... <http://www.qrparci.org/>

AL7FS was originally licensed as WN0LPK in March 1965 (WA0LPK from 1965-1985). Jim is a member of AARC and SCRC and he has participated in HF from 160-10 meters (CW and SSB), packet, satellite, 6 meter, UHF, VHF, ATV, EME (2 meter WAS #36), DX and QRP. QRP has lasted the longest and the strongest - 1970 to 1999. *Permission is granted for reproduction of this article if it is used as written and credit is given to the author and to the Anchorage Amateur Radio Club (AARC) newsletter.* AL7FS@QSL.NET

+====+====+====+====+

From The ARRL Letter

Vol. 18, No. 5 January 29, 1999

COLOMBIAN QUAKE SPRINGS HAMS TO ACTION

Amateur Radio nets activated in short order on 20 and 40 meters following an earthquake January 25 in West Central Colombia. The quake, measuring 6 on the Richter scale, killed more than 1000 people, injured thousands of others, and caused major structural damage. The Salvation Army reports more than 150,000 people missing in Colombia's mountainous coffee-growing region. The initial tremor and some aftershocks were felt in the capital city of Bogota. News media in Colombia were reporting "chaos" in the city of Armenia, where some residents stormed and looted stores and supermarkets when relief supplies failed to materialize. Martial law was declared there.

"In most cases, the problem is in the distribution," said Dallas Carter, W3PP, in Laurel, Delaware. Carter monitored some of the first reports of the quake via Amateur Radio on a 20-meter relief net run by HK3SA and HK3RQA and has been assisting as a US net control—sometimes for as long as 12 hours a day. Amateur activities were taking place on 14.347 MHz and locally on 7.085 and 7.090 MHz.

Ham radio was a major source of information out of the affected area in the hours immediately following the disaster. "They are requesting blood, water, medical assistance, rescue equipment," Carter said this week. He said HK3SA was flown into the city of Armenia and has set up an HF operation to maintain contact via 40 and 20 meters to directly handle international health-and-welfare requests as well as keep in touch with the capital. He said 2-meter repeaters were being used for local emergency coordination.

The Salvation Army Team Emergency Radio Network (SATERN) has established contact with hams in Colombia and a net on 14.265 MHz and was helping with inquiries about victims. At this point, most of the health-and-welfare traffic was coming into the US from the stricken regions, while not much was going into the area. The Salvation Army's Michael Koenemund, KB1CKF, reported that the Salvation Army had dispatched a 10-member assessment and first response team from Bogota to the affected cities of Pereira and Ibaque. "The team will render primary services, including food, water and shelter," he said.

The International Red Cross in Colombia has dispatched a team of 80, plus relief equipment and supplies "There's an extreme shortage of doctors," Carter said. "They're still digging people out."

The ARRL has offered its assistance to the Liga Colombiana de Radioaficionados (LCRA), the League's IARU sister society in Colombia.

Media in Bogota have set up Web sites with information from the affected areas including lists of individual names and status. See <http://www.rcntv.com.co> or <http://www.eureka.com.co/terremoto/> (Spanish) or <http://www.eureka.com.co/terremoto/indexEn.html> (English).

TORNADOES, CLEANUP KEEP DIXIE HAMS BUSY

Additional severe weather hit parts of the South January 22, less than a day after tornadoes killed eight people in Arkansas and injured many others in Arkansas and Tennessee. Amateur Radio operators volunteered as needed in the wake of the January 21 tornadoes as well as the storms the following day reported in Louisiana, Texas, Mississippi, and Alabama. Few additional injuries and no deaths were reported, and damage for the most part was minimal.

Arkansas Section Manager Roger Gray, N5QS, reported several amateurs working with cleanup crews, disaster assessment teams, or Red Cross mobile feeding stations after the January 21 tornadoes that swept the Little Rock area and badly damaged the town of Beebe.

ARES nets were activated on both local VHF repeaters and on 75 meters after more than 30 tornadoes touched down in White County. "I personally saw one pass within one mile of my house and within a half mile of [ARRL Vice President Joel Harrison] W5ZN's house. Gray says White County ARES closed down January 26 after nearly a week's operation. Gray reports that on several occasions as the storms developed, various net control stations were forced to take cover and hand over NCS duties to another station. White County EC James Wiles, KK5WM, in Beebe, was forced to seek shelter after his home suffered tornado damage. "He was later able to return to salvage his radio equipment and set up a station at a

shelter and man it single-handed through the night," Gray said.

A health-and-welfare and disaster recovery net evolved from the storm-spotting net after the storms had passed through, and net control moved to Red Cross headquarters. Gray said more than 70 hams assisted with traffic for the Red Cross and Salvation Army as well as health-and-welfare inquiries, emergency, and general disaster recovery. "Three crossband repeaters were in operation to allow low-power stations to access distant repeaters," he said. Hams also made temporary repairs to the local ambulance service base station antenna.

In Tennessee, Madison County EC Kenny Johns, AB4EG, worked with volunteers from several areas to assist the Red Cross with damage assessment in 19 affected counties. Johns said in Jackson and in Madison County, more than 300 homes, apartments and mobile homes were completely destroyed. Another 357 received extreme damage. ARRL Delta Division Vice Director Henry Leggette, WD4Q, visited the Jackson area January 28 and met with members of John's club, the West Tennessee Amateur Radio Society, who were coordinating activities on VHF and UHF. He reported that more than 200 hams helped out in some way after the storms. "This made me very proud to be an Amateur Radio operator," Leggette said.

The town of Clarksville, Tennessee, also received significant damage from the January 22 storms. Under the direction of Albert Furlow, KA1FFO, members of the Clarksville Amateur Radio Transmitting Society's (CATS) disaster team activated a SKYWARN net. After the storm, CAT members worked with the Red Cross and emergency officials, passing spot information and later assisting with damage assessment. Furlow reports hams also will help with the cleanup effort this weekend.

Also on January 22, National Red Cross Headquarters requested Virginia ARES to follow up after a reported F4 tornado struck the northeastern Mississippi town of Corinth, cutting off contact with the community of approximately 14,000. The Red Cross contacted Virginia ARES to attempt to get information on possible damage and injuries. Volunteers were able to get information via the Mississippi Emergency Net indicating trees and power lines down and some property damage, but no deaths and only one injury. Virginia ARES relayed all information to the Red Cross, which indicated that it was the first news they had received from the affected area.

FCC COMES A CALLIN' IN THE CAROLINAS

FCC engineering and legal staff conducted unannounced Amateur Radio station inspections January 21 and 22 in North and South Carolina, reports FCC amateur enforcement honcho Riley Hollingsworth, K4ZDH.

"Commission personnel inspected the stations of John A. Abernethy, K4OKA, an Extra Class licensee in Hickory, North Carolina, and Richard Whiten, WB2OTK, a General Class licensee in Easley, South Carolina," Hollingsworth said.

In both visits, FCC officials were accompanied by local law enforcement personnel. Hollingsworth said both amateurs cooperated with the inspections, which lasted approximately two hours apiece. FCC officials said that both operators "were the subjects of many complaints about their operations on the 75 and 20 meter Amateur bands." The officials said the results of the inspections were "under review," and declined further comment.

Earlier this month, the FCC issued a stern warning to an Indian River County, Florida ham who, the FCC said, had been using the amateur airwaves to transmit information on, among other things, the credit reports, criminal records, and mortgage foreclosures of other hams and their families. "You have apparently made these disclosures and broadcasts for the purpose of deliberately and maliciously interfering with licensed Amateurs operating on those bands, and for harassment or perceived retaliation," said the letter, signed by Hollingsworth.

"We view this matter as extremely serious," he told the ARRL. Hollingsworth called the alleged operation "contrary to the purpose of Amateur Radio" and said that it "endangers the entire Amateur Radio frequency allocation internationally."

LEAGUE SEEKS ULS CHANGES

The ARRL has asked the FCC to make some minor alterations to its impending Universal Licensing System rules. The ULS, being phased in by the FCC throughout 1999, will consolidate application forms and procedures for several FCC services. Among other things, it will replace the venerable FCC Form 610 series with a new Form 605 and will provide for electronic filing, modification, and renewal for amateurs.

The ULS Report and Order was issued last October by the FCC, which also took the occasion to amend the rules to make it easier for foreign hams to operate temporarily in the US.

In a petition for partial reconsideration, the League said it wants the FCC to continue to issue paper license documents; to come up with a way for applicants not having a Taxpayer Identification Number--typically a Social Security Number--to meet ULS requirements to provide one; and to include on Form 605 a section for Volunteer Examiners to certify that an applicant has met the requirements for a new or upgraded ham ticket. In addition, the League plans to ask the FCC to restore wording in Section 97.15(e) that references the limited

federal preemption, PRB-1. The section was inadvertently deleted during the Commission's redrafting of the rules to accommodate the ULS changes.

The ARRL already has expressed concerns over FCC suggestions that the agency might do away with paper license documents altogether and rely instead on the "license grant"—the virtual document that resides within the FCC's computerized amateur database. In its latest filing, January 12, the League said that in some states that regulate possession of scanning receivers but exempt amateurs, inability to produce a license document could result in "arrest and criminal prosecution as well as seizure of equipment by local law enforcement." The League said hams operating overseas also often must produce a paper document. The ARRL noted that the CEPT agreement requires US hams traveling in CEPT countries to possess a US government-issued license document and that ITU regulations "appear to require" a government-issued license document.

The League also called on the FCC to devise a means for those not holding a TIN—such as foreigners who hold US ham tickets—to comply with the ULS rules which require an applicant to provide one. "One possibility for these persons would be for the Commission to issue them some substitute TIN or some other type of registration number," the League proposed.

Finally, the ARRL pointed out to the FCC that neither the main Form 605 nor the Amateur Radio Schedule D contains a section for VE certifications and called on the Commission to modify the form to include the section as it now appears on Form 610.

SAREX WORKING GROUP CHAIRMAN CALLS FOR COMMON SENSE AND COOPERATION

The Chairman of the Space Amateur Radio EXperiment Working Group, Roy Neal, K6DUE, has lashed out at those he says have "sought to destroy" the Amateur Radio International Space Station (ARISS) program. SAREX, an ARISS partner, coordinates the Amateur Radio efforts of AMSAT, ARRL, and NASA for manned space flights.

"I have been distressed by the recent actions taken by some individuals," he said. "They are waging a war on our international cooperation." Neal's remarks, issued January 18 as a "White Paper to ARISS" focus on ARISS' concerns about the direction of the independent so-called MAREX-NA project headed by Miles Mann, WF1F. Neal does not mention Mann or his program by name, however.

"NASA and its partners have enough problems putting together an international space station. NASA does not want or need problems with Amateur Radio," Neal said. "These individuals have written messages saying they plan to create such problems if they don't get their way."

With cooperation from some Russian space officials, Mann and his colleagues recently deployed an amateur slow-scan TV system aboard the Mir space station. The system has been operating on Mir's normal 2-meter packet and FM voice frequency, however, instead of on the 70-cm frequency coordinated for the SSTV system.

"Unfortunately, they apparently have little appreciation for the complexity, level of detail, and effort required to ensure a permanent Amateur Radio presence in space," Neal said. "These people have demonstrated their willingness to flout the coordination program by announcing that the SSTV system will continue to operate on 145.985 MHz instead of the 70-cm frequency coordinated for that purpose."

Saying the time has come "to turn off the nonsense and turn on the common sense," Neal said he does not plan to engage in a contest of words "which no one can win." At the same time, he said, the door is open to consideration of all viable Amateur Radio projects for the International Space Station.

"The ARISS team welcomes participation by all," he said, in an apparent reference to claims by Mann that ARISS was turning away outside projects.

ARISS partners met last weekend in Houston, Texas, to discuss project status as well as plans for the initial, interim, and permanent deployment of Amateur Radio equipment aboard the ISS.

+ + + + + + + + + + + + + + +

From The ARRL Letter
Vol. 18, No. 4 January 22, 1999

BOARD EMBRACES NEW TECHNOLOGY FOR AMATEUR RADIO'S FUTURE

The ARRL Board of Directors has adopted an initiative proposed by President Rod Stafford, W6ROD, to promote new technology in Amateur Radio. Meeting in Houston, Texas, January 15 and 16, the Board adopted Stafford's proposal to establish an Amateur Radio Technology Task Force to develop a strategy and plan for exploring new technologies and assessing their applicability and possible incorporation into Amateur Radio.

Northwestern Division Director Greg Milnes, W7AGQ, opened the Board's first 1999 session with a tribute to former Director Mary Lou Brown, NM7N, who died last December 3. The Board also observed a moment of silence in her memory.

In his meeting report, Stafford expressed his concerns about dwindling amateur activity in general and a decline in ARRL membership in particular. "In my humble opinion, it seems

that the average ham radio operator is not very excited about anything in Amateur Radio these days," he said. The Board went along with Stafford's suggestion that an infusion of newer technologies into the hobby might renew enthusiasm.

Stafford will appoint members to the Technology Task Force who have been actively involved in experimenting with or developing new technology. An initial report is due next January. In a collateral move, the Board reconstituted the Future Systems Committee as the Amateur Radio Technology Working Group to serve as a resource for the Technology Task Force. As an adjunct to the Technology Task Force, the Technology Working Group will conduct experiments, research and development involving newer technologies.

In other action, the Board declined—at least for now—to join the National Frequency Coordinators' Council in petitioning the FCC seeking rules requiring frequency coordination for fixed repeaters and auxiliary stations. A majority of the Board said there was no compelling evidence warranting a move beyond the existing rules. But the Board did invite the NFCC to revisit the issue at a later date.

"Coordinated repeaters already have a degree of priority," said ARRL Executive Vice President David Sumner, K1ZZ, in explaining the Board's decision. Board members are keeping an open mind, but by and large, they are not yet persuaded of the necessity to go beyond that."

In a letter to Stafford following the meeting, NFCC President George Isely, W9GIG, expressed disappointment. "I think it's fair to say this is not a dead issue for the NFCC," he said. NFCC members had approved the filing of the petition by a wide margin.

In his report to the Board, Vice President Joel Harrison, W5ZN, praised an apparent return to enforcement by the FCC. Harrison said the League has been pushing for better enforcement for some time, and that FCC action against willful violators has been a historical and primary concern of the amateur community. Harrison summarized recent FCC actions as the Board applauded.

EXECUTIVE COMMITTEE TO PONDER LEAGUE NAME CHANGE

Could the American Radio Relay League enter the new millennium with a new name? The ARRL Board of Directors has asked the League's Executive Committee to develop a proposal to change the League's name to one that more clearly reflects the focus and purpose of the organization to hams and nonhams alike. The Board charged the Executive Committee to develop a name change proposal for consideration by the Board at its July meeting.

The name-change idea is not a new one. A previous proposal was considered by the Board several years ago, but it was set aside.

The now-obscure "Relay" part of the League's name often is the most troublesome to explain nowadays. It refers to the earlier practice, fostered by the League, of relaying long-distance message traffic from station to station in a time when direct contact was not always feasible. The Board's resolution said the League's current name no longer adequately reflects "the breadth of amateur radio" and that the ARRL needs a name that would "clearly reflect our focus and purpose—Amateur Radio—to those both inside and outside our organization."

The Board said the year 2000 would be "a natural point for change." Members who learned of the resolution this week discussed the issue on various Internet reflectors.

Earlier this decade, the ARRL Board declined a suggestion from the Long Range Planning Committee to change the League's name to the American Amateur Radio League—ironically the same name first suggested by ARRL founder Hiram Percy Maxim in 1914. The November 1992 issue of QST broached the subject to the League's members and encouraged them to express their opinions. Directors overwhelmingly—but not unanimously—abandoned the name-change campaign at the Board's January 1993 meeting.

FCC ISSUES 5-MHZ EXPERIMENTAL LICENSE TO ARRL

The FCC has issued an Experimental Radio Service license to the ARRL to permit two-way tests in the vicinity of 5 MHz, the most likely site of the next amateur HF band. The license, bearing the call sign WA2XSY, was issued January 8. A group of 15 current amateurs in various parts of the US and the Caribbean will conduct experimental, two-way RTTY and SSB transmissions within the band 5.100 to 5.450 MHz. To avoid interfering with existing services, the participants will confine their operations to the least-populated 50-kHz segment.

"The idea is to show that an amateur allocation there will improve our emergency communication capabilities by filling the gap between the 3.5 and 7.0 MHz bands," said ARRL Executive Vice President David Sumner, K1ZZ. Sumner pointed out that several of the participants are phone net members in the Caribbean and Gulf area who frequently handle hurricane-related traffic and now must alternate between 75 meters and 40 meters. Other participants are members of a nationwide digital data-forwarding network.

The Experimental license is good for two years. Two studies by the National Telecommunications and Information Administration (NTIA) include an allocation at 5 MHz among the future spectrum needs for the Amateur Service.

that the average ham radio operator is not very excited about anything in Amateur Radio these days," he said. The Board went along with Stafford's suggestion that an infusion of newer technologies into the hobby might renew enthusiasm.

Stafford will appoint members to the Technology Task Force who have been actively involved in experimenting with or developing new technology. An initial report is due next January. In a collateral move, the Board reconstituted the Future Systems Committee as the Amateur Radio Technology Working Group to serve as a resource for the Technology Task Force. As an adjunct to the Technology Task Force, the Technology Working Group will conduct experiments, research and development involving newer technologies.

In other action, the Board declined—at least for now—to join the National Frequency Coordinators' Council in petitioning the FCC seeking rules requiring frequency coordination for fixed repeaters and auxiliary stations. A majority of the Board said there was no compelling evidence warranting a move beyond the existing rules. But the Board did invite the NFCC to revisit the issue at a later date.

"Coordinated repeaters already have a degree of priority," said ARRL Executive Vice President David Sumner, K1ZZ, in explaining the Board's decision. Board members are keeping an open mind, but by and large, they are not yet persuaded of the necessity to go beyond that."

In a letter to Stafford following the meeting, NFCC President George Isely, W9GIG, expressed disappointment. "I think it's fair to say this is not a dead issue for the NFCC," he said. NFCC members had approved the filing of the petition by a wide margin.

In his report to the Board, Vice President Joel Harrison, W5ZN, praised an apparent return to enforcement by the FCC. Harrison said the League has been pushing for better enforcement for some time, and that FCC action against willful violators has been a historical and primary concern of the amateur community. Harrison summarized recent FCC actions as the Board applauded.

EXECUTIVE COMMITTEE TO PONDER LEAGUE NAME CHANGE

Could the American Radio Relay League enter the new millennium with a new name? The ARRL Board of Directors has asked the League's Executive Committee to develop a proposal to change the League's name to one that more clearly reflects the focus and purpose of the organization to hams and nonhams alike. The Board charged the Executive Committee to develop a name change proposal for consideration by the Board at its July meeting.

The name-change idea is not a new one. A previous proposal was considered by the Board several years ago, but it was set aside.

The now-obscure "Relay" part of the League's name often is the most troublesome to explain nowadays. It refers to the earlier practice, fostered by the League, of relaying long-distance message traffic from station to station in a time when direct contact was not always feasible. The Board's resolution said the League's current name no longer adequately reflects "the breadth of amateur radio" and that the ARRL needs a name that would "clearly reflect our focus and purpose—Amateur Radio—to those both inside and outside our organization."

The Board said the year 2000 would be "a natural point for change." Members who learned of the resolution this week discussed the issue on various Internet reflectors.

Earlier this decade, the ARRL Board declined a suggestion from the Long Range Planning Committee to change the League's name to the American Amateur Radio League—ironically the same name first suggested by ARRL founder Hiram Percy Maxim in 1914. The November 1992 issue of QST broached the subject to the League's members and encouraged them to express their opinions. Directors overwhelmingly—but not unanimously—abandoned the name-change campaign at the Board's January 1993 meeting.

FCC ISSUES 5-MHZ EXPERIMENTAL LICENSE TO ARRL

The FCC has issued an Experimental Radio Service license to the ARRL to permit two-way tests in the vicinity of 5 MHz, the most likely site of the next amateur HF band. The license, bearing the call sign WA2XSY, was issued January 8. A group of 15 current amateurs in various parts of the US and the Caribbean will conduct experimental, two-way RTTY and SSB transmissions within the band 5.100 to 5.450 MHz. To avoid interfering with existing services, the participants will confine their operations to the least-populated 50-kHz segment.

"The idea is to show that an amateur allocation there will improve our emergency communication capabilities by filling the gap between the 3.5 and 7.0 MHz bands," said ARRL Executive Vice President David Sumner, K1ZZ. Sumner pointed out that several of the participants are phone net members in the Caribbean and Gulf area who frequently handle hurricane-related traffic and now must alternate between 75 meters and 40 meters. Other participants are members of a nationwide digital data-forwarding network.

The Experimental license is good for two years. Two studies by the National Telecommunications and Information Administration (NTIA) include an allocation at 5 MHz among the future spectrum needs for the Amateur Service.

Thank you in advance for your help. Barry

+====+====+====+====+

ZL9CI DXPEDITION RACKS UP THE Qs!

The Kermadec DX Association's ZL9CI Campbell Island DXpedition has a good head start on the way to topping the QSO record set a couple of years ago by the Heard Island VK0IR DXpedition. In its first seven days, the crew at ZL9CI racked up some 45,000 contacts to the delight of hams around the world. During two weeks in January 1997, the VK0IR DXpedition set a new world's record by logging more than 80,000 contacts. The ZL9CI DXpedition to Campbell continues through January 24, with activity on all HF bands—CW, SSB, and RTTY.

"Even though the solar flux is around 120, the team is astonished by the massive pileups," a January 9 team news release declared. "The CW members of the team are working over 200 per hour on a regular basis."

Operators at ZL9CI include well-known US CW contester and DXer Trey Garlough, N5KO (ex-WN4KKN). Others are Team Leader Ken Holdom, ZL2HU; Lee Jennings, ZL2AL; Brian Biggins, VE3XA; Declan Craig, EI6FR; Wilbert Knol, ZL2BSJ; Jun Tanaka, JH4RHF; Andrew Williamson, G10NWG; Jason Christensen, ZL2URN; James Brooks, 9VIYC; and Murray Woodfield, ZL1CN. Four regional "pilot stations"—including two in the US—have been coordinating activities on the outside.

Logs are available on the Internet, so stations can check to see if they are, indeed, "in the log." The team says that one of its objectives is to give "everyone, in every country, that elusive 'new one.'" The team notes that "100 W trap vertical stations" are being as successful as the big guns and adds, "We try to work everyone on an equal basis."

QSL to Kermadec DX Association, PO Box 56099, Tawa, New Zealand. See the ZL9CI Web site for QSLing details and for ZL9CI logs at <http://www.qsl.net/zl9ci/>.

+====+====+====+====+

HAM RADIO CLASSES begin March 2, 1999

Begin practicing the Code Now!!!

Instructors Lil Marvin NL7DL and Rick Marvin

Novice , Technician & General Classes begin March 2, 1999 from 6 to 9 PM
Classes will be at the Red Cross Building, at 8th and Cordova on the 2nd floor
Fee is \$35.00, call 277-6741 to Register

Requested Student Materials:

NOVICE: 0-5 WPM ARRL or W5YI code tapes or equivalent

TECHNICIAN: Gordon West's New No Code Book, or equivalent

GENERAL: Gordon West, ARRL or General Class Manual + 13 WPM tapes

Contact the instructors or get the materials at the EARS Hamfest Feb 27

The Anchorage Amateur Radio Club News

Anchorage Amateur Radio Club, Inc
Post Office Box 101987
Anchorage, Alaska 99510-1987

Bulk Rate
U.S. Postage
PAID
Anchorage, AK
Permit No. 223

Roger Hansen KL7HFQ L036
POB 520343

Big Lake AK 99652-0343

||||||||||||||||||||||||||||||||||||||

